

ABSTRACT OF THE DISCLOSURE

An electro-absorptive-modulated laser (EAML) module
5 includes a signal transmission line for transferring a high-
frequency modulating signal from a signal source having an
output impedance of 50Ω to an EA modulator in the EAML
module. The signal transmission line includes a coplanar
waveguide with ground plane (CPWG) having a characteristic
10 impedance of 41.8Ω , a series resistor having a resistance of 5
 Ω , and a termination resistor of 50 to 150Ω . The
characteristic impedance of CPWG is controlled by reducing
the gap between the signal line and coplanar ground plates.